Biogeographically, the Great Indian or the Thar Desert is the easternmost edge of the Sahara-Arabian Desert zone with the highest human population density covering an area of approximately 2,80,000km² (Sekhar, 1998). The Thar Desert is unique and is the only habitat of its type in the Indian subcontinent; the extremely hot region of the country exhibits vivid and spectacular biodiversity. The abundance of certain insects, mites, arachnids, centipedes, millipedes, amphibia, reptiles, birds and mammals speaks of the highly specialized deserticolous adaptations. Although some studies have been undertaken in the Thar Desert (Roonwal, 1982; Rathore, 1984; Rahmani, 1989; Prakash et al., 1992), very little information exists on spiders.

The Desert National Park (DNP) (25°47' & 75°15'-70°45'E) is the proposed Desert Biosphere Reserve (DBR) (Figs. 1 & 2) which falls in the extreme hot, arid region of very low rainfall zone of the country. The human population is low at 4-5 persons/km². The climate of this region is characterised by extremes of temperature. During summer the temperature rises up to 49°C, the nights are generally very cool. The temperature in winter may fall down to 2°C. The rainfall is about 3,162km² with 1,900km² in Jaisalmer District and the remaining 1,262km² in Barmer District of Rajasthan. The area consists of sandy plains.

The study was conducted in Desert National Park (DNP) Jaisalmer and Barmer District, Rajasthan from 1994 to 1998. A thorough search was made in different types of vegetation, sand dunes and other habitats. Collections were made by hand picking or directly into the specimen tubes/jars and preserved in 70% alcohol. The spiders were identified with the help of standard key of systematic references (Pocock, 1900; Subramanyam, 1968, 1969; Tikader, 1980, 1982; Tikader & Biswas, 1981; Vijayalakshmi & Ahimaz, 1993) and with an ordinary hand lens and microscope.

A total of 28 species of spiders belonging to 13 families and 21 genera (Table 1) were recorded in Desert National Park. Among these, five species - Lycosa madani, Uroctea indica, Drassodes parvidens, Zelotes desioi and Drassodes luridus were new records for this area. Most of the spiders were non weavers. Neoscona sp., Herennia ornatismissa, Stegodyphus sarasinorum were the only weavers. Highest number of genera and species were recorded in Lycosidae and Gnaphosidae followed by Thomisidae and Clubionidae.

The results of the present study shows that great variety of spiders exist in DNP. Among the recorded species, Stegodyphus sarasinorum, Hereropoda fabrei, Herennia ornatismissa, Zelotes desioi were recorded only from Jaisalmer District. Other species were observed in both the districts.

REFERENCES


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NOTE

FAUNA OF PROTECT AREAS - 7

The Desert National Park (DNP) (25°47' & 75°15'-70°45'E) is the proposed Desert Biosphere Reserve (DBR) (Figs. 1 & 2) which covers an area of approximately 2,80,000km² (Sekhar, 1998). The temperature in winter may fall down to 2°C. The nights are generally very cool. The rainfall is about 3,162km² with 1,900km² in Jaisalmer District and the remaining 1,262km² in Barmer District of Rajasthan. The area consists of sandy plains.

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The entire area is essentially plain grassland with few hills in the northwestern side of DNP. Sand hills and sand dunes dominate the entire zone. Most of the dunes are of Barchan type but tall fixed and parallel dunes are also present. These dunes, at places, rise up to 100m elevation. In many places the desert consists of gravel, bare rock, sun-baked mud and loam. The latter form the bulk of the soil of this region. The major area consists of sandy plains.

Vegetation: Despite environmental limitations, some parts of the DNP appear as vast expanses of grassland intermixed with shrubs and small trees. Pandey et al. (1985) have reported 168 species of vascular plants belonging to 111 genera under 45 families from DNP. Lasiurus sindicus is the most important grass occupying 80% of the grassland community (Sekhar, 1998). Some of the important grasses are Aristida sp., and Orpetum thomaeum. Dominant trees and shrubs are Prosopis cineraria (Khajam), Haloxylon salicornicum (Lana), Calligonum polygonoides (Phog), Capparis deciduas (Karil), Aerva pseudomentosa (Sinia), Calotrops procura (Aak), and Salvadora oleoides (Jar).

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REFERENCES


Table 1. List of spiders recorded in Desert National Park

<table>
<thead>
<tr>
<th>Scientific name</th>
<th>Family</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lycosa madani Pocock</td>
<td>Lycosidae</td>
<td>Pocock (1990)</td>
</tr>
<tr>
<td>Lycosa sp.</td>
<td>Lycosidae</td>
<td>Pocock (1990)</td>
</tr>
<tr>
<td>Paradosa sumatrana (Thorell)</td>
<td>Lycosidae</td>
<td>Pocock (1990)</td>
</tr>
<tr>
<td>Paradosa heteroptalma (Simon)</td>
<td>Lycosidae</td>
<td>Pocock (1990)</td>
</tr>
<tr>
<td>Paradosa pusiola (Thorell)</td>
<td>Lycosidae</td>
<td>Pocock (1990)</td>
</tr>
<tr>
<td>Paradosa sp.</td>
<td>Lycosidae</td>
<td>Pocock (1990)</td>
</tr>
<tr>
<td>Hippasa sp.</td>
<td>Lycosidae</td>
<td>Pocock (1990)</td>
</tr>
<tr>
<td>Neoscona sp.</td>
<td>Thomisidae</td>
<td>Pocock (1990)</td>
</tr>
<tr>
<td>Herennia ornatismissa (Dol.)</td>
<td>Thomisidae</td>
<td>Pocock (1990)</td>
</tr>
<tr>
<td>Ozyptila chandosiensis Tikader</td>
<td>Ozyptilidae</td>
<td>Tikader (1980)</td>
</tr>
<tr>
<td>Synaema sp.</td>
<td>Ozyptilidae</td>
<td>Tikader (1980)</td>
</tr>
<tr>
<td>Phidippus sp.</td>
<td>Heteropodaefabrei Simon</td>
<td>Heteropodidae</td>
</tr>
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<td>Erioptera sp.</td>
<td>Castianeria</td>
<td>Corinnidae</td>
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<td>Erisidae</td>
<td>Stegodyphus sarasinorum Karch</td>
<td>Staphylinidae</td>
</tr>
<tr>
<td>Salticidae</td>
<td>Erioides</td>
<td>Salticidae</td>
</tr>
<tr>
<td>Marpissa sp.</td>
<td>Salticidae</td>
<td>Tikader (1980)</td>
</tr>
</tbody>
</table>

* - Female; ** - male

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C. Sivaperuman & N.S. Rathore

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